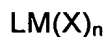


We claim:

1. A process comprising polymerizing, in the presence of a Group 8-10 metal complex and an activator, one of the monomer groups (a) through (f):

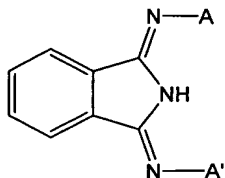
- (a) a vinyl monomer selected from the group consisting of vinyl aromatics, vinyl ethers, vinyl esters, and vinyl halides thereof;
- (b) a vinyl monomer selected from the group consisting of vinyl ethers, vinyl esters, and vinyl halides, and at least one olefin;
- (c) a hydroxy-functional monomer selected from the group consisting of hydroxyalkyl acrylates, hydroxyalkyl methacrylates, allylic alcohols, and alkoxylated allylic alcohols, and at least one alkyl or aryl acrylate or at least one alkyl or aryl methacrylate;
- (d) a hydroxy-functional monomer selected from the group consisting of hydroxyalkyl acrylates, hydroxyalkyl methacrylates, allylic alcohols, and alkoxylated allylic alcohols, at least one alkyl or aryl acrylate or at least one alkyl or aryl methacrylate, and at least one olefin;
- (e) a hydroxy-functional monomer selected from the group consisting of hydroxyalkyl acrylates, hydroxyalkyl methacrylates, allylic alcohols, and alkoxylated allylic alcohols, and at least one vinyl aromatic monomer; or
- (f) a hydroxy-functional monomer selected from the group consisting of hydroxyalkyl acrylates, hydroxyalkyl methacrylates, allylic alcohols, and alkoxylated allylic alcohols, at least one vinyl aromatic monomer, and at least one olefin.

2. The process of claim 1 wherein the complex has the general structure:



wherein M is a Group 8-10 metal; L is a polymerization-stable ligand selected from isoindolines or bis(imines); X is a labile ligand; and n is greater than or equal to 1.

3. The process of claim 2 wherein L is an isoindoline ligand having the general structure:



wherein A and A' are the same or different aryl or heteroaryl groups.

4. The process of claim 3 wherein A and A' are identical aryl groups.

5. The process of claim 3 wherein A and A' are identical heteroaryl groups.

6. The process of claim 2 wherein the M is Fe and L is a 1,3-bis(2-mesitylimino)isoindoline or a 1,3-bis(2-pyridylimino)isoindoline.

7. The process of claim 1 wherein the activator is selected from the group consisting of alkyl alumoxanes, alkylaluminum compounds, aluminoboronates, organoboranes, ionic borates, and ionic aluminates.

8. A polymer made by the process of claim 1.

9. An article comprising the polymer of claim 8.

10. A process which comprises polymerizing, in the presence of a Group 8-10 metal complex and an activator, a hydroxy-functional monomer selected from the group consisting of hydroxyalkyl acrylates, hydroxyalkyl methacrylates, allylic alcohols, and alkoxyated allylic alcohols, at least one

alkyl or aryl acrylate or at least one alkyl or aryl methacrylate, optionally a vinyl aromatic monomer, and optionally a C₂₋₁₀ α -olefin.

11. The process of claim **10** wherein the hydroxy-functional monomer is selected from the group consisting of hydroxyethyl acrylate, hydroxypropyl acrylate, hydroxyethyl methacrylate, hydroxypropyl methacrylate, hydroxybutyl acrylate, hydroxybutyl methacrylate, allyl alcohol, methallyl alcohol, propoxylated allyl alcohol, and ethoxylated allyl alcohol.

12. The process of claim **10** wherein at least one of the alkyl or aryl acrylate, or the alkyl or aryl methacrylate, is selected from the group consisting of n-butyl acrylate, n-butyl methacrylate, 2-ethylhexyl acrylate, 2-ethylhexyl methacrylate, methyl acrylate, methyl methacrylate, t-butyl acrylate, t-butyl methacrylate, iso-butyl acrylate, iso-butyl methacrylate, iso-bornyl acrylate, and iso-bornyl methacrylate.

13. The process of claim **10** wherein the hydroxy-functional monomer is allyl monopropoxylate and the alkyl acrylate or methacrylate is n-butyl acrylate or n-butyl methacrylate.

14. The process of claim **10** wherein the vinyl aromatic monomer is selected from the group consisting of styrene, α -methyl styrene, *p*-methyl styrene, and *p*-t-butyl styrene.

15. The process of claim **10** wherein the α -olefin is selected from the group consisting of ethylene, propylene, 1-butene, 1-pentene, 1-hexene, and 1-octene.

16. The process of claim **10** wherein the late transition metal complex comprises Fe and a 1,3-bis(2-mesitylimino)isoindoline or a 1,3-bis(2-pyridylimino)isoindoline ligand, and wherein the activator is an alkyl alumoxane.

17. A polymer made by the process of claim **10**.

- 18.** An article comprising the polymer of claim 10.
- 19.** A process which comprises polymerizing, in the presence of a Group 8-10 metal complex and an activator, at least one vinyl ester and at least one C₂₋₁₀ α -olefin.
- 20.** The process of claim 19 wherein the vinyl ester is vinyl acetate and the α -olefin is ethylene.
- 21.** A polymer made by the process of claim 19.
- 22.** An article comprising the polymer of claim 21.
- 23.** A process which comprises polymerizing, in the presence of a Group 8-10 metal complex and an activator, a hydroxy-functional monomer selected from the group consisting of hydroxyalkyl acrylates, hydroxyalkyl methacrylates, allylic alcohols, and alkoxylated allylic alcohols, at least one vinyl aromatic monomer, and optionally at least one C₂₋₁₀ α -olefin.
- 24.** The process of claim 23 wherein the vinyl aromatic monomer is styrene and the hydroxy-functional monomer is selected from the group consisting of allyl alcohol, methallyl alcohol, alkoxylated allyl alcohol, and alkoxylated methallyl alcohol.
- 25.** A polymer made by the process of claim 23.
- 26.** An article comprising the polymer of claim 25.